

## DATA INPUT DEADLINES AND GUIDANCE TO INFORM PLANNING USING THE PHASE 6 MODEL

### BACKGROUND

On July 9, 2018, the Principals Staff Committee (PSC) agreed to limit changes to the Phase 6 Model moving forward, and provide consistency to partners as they develop their Phase III Watershed Implementation Plans (WIPs), Milestones, and assess progress towards milestone and WIP implementation goals. Specifically, the PSC agreed:

*“The Partnership will make no further changes to the Phase 6 Model until the end of 2019, in advance of the 2020-2021 Milestones, when decisions on any model changes would be made by the Partnership.*

*Fully consistent with prior decisions by the Management Board and the Water Quality Goal Implementation Team, all future changes to the Partnership’s Phase 6 suite of models will continue to be made only after decisions by the Partnership in advance of each two-year milestone period.”<sup>1</sup>*

This document seeks to provide further guidance in the form of deadlines and examples of data products that may inform future milestone planning and progress assessment periods.

### DATA INPUT AND PLANNING DEADLINES

The following is a list of data input and planning deadlines for each planning period: 2018-2019 Milestones; Phase III WIPs; and 2020-2021 Milestones.

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#### 2018-2019 MILESTONES DATA INPUT AND PLANNING DEADLINES

- **December 3, 2018** - Jurisdictions submit final 2018 progress data to CBPO.
- **December 3, 2018 – January 31, 2019** - CBPO QA/QC 2018 progress data, including verification.
- **January 15, 2019** - Jurisdictions submit interim progress for 2018-2019 programmatic milestones to EPA.
- **February 8, 2019** – CBPO finalizes 2018 progress model assessment.
- **December 1, 2019** - Jurisdictions submit final 2019 progress data to CBPO.
- **December 1, 2019 – January 31, 2020** - CBPO QA/QC 2019 progress data, including verification.
- **January 15, 2020** - Jurisdictions submit final progress for 2018-2019 programmatic milestones to EPA.
- **February 8, 2020** – CBPO finalizes 2019 progress model assessment.

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#### PHASE III WIP DEVELOPMENT INPUT AND PLANNING DEADLINES

- **Present - April 1, 2019** – Interim BMPs for planning purposes added to CAST.
- **Present – April 1, 2019** – CBPO works with states to design draft Land Use Policy BMPs.
- **April 12, 2019** – Land Use Policy BMPs finalized in CAST for draft Phase III WIP model scenarios.
- **April 12, 2019** – Draft Phase III WIP document and Phase III WIP input decks due to EPA.
- **April 12, - August 9, 2019** – CBPO works with states to design final Land Use Policy BMPs.
- **August 9, 2019** – Final Phase III WIP document and Phase III WIP input decks due to EPA.

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#### 2020-2021 MILESTONES DATA INPUT AND PLANNING DEADLINES

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<sup>1</sup> The decision can be found in the July 9, 2018 PSC meeting minutes at:

[https://www.chesapeakebay.net/channel\\_files/29609/i.a.\\_psc\\_actions-decisions\\_7-9-18\\_final\\_2.pdf](https://www.chesapeakebay.net/channel_files/29609/i.a._psc_actions-decisions_7-9-18_final_2.pdf).

*The schedule described below will be the general schedule for all future milestone periods unless changed by EPA or the Partnership.*

- **April 30, 2019** - All data from jurisdictional partners and source sector workgroups that may inform modeling changes for the next milestone period must be submitted to CBPO. Refer to the Potential Data Input Changes section of this document examples of data from state partners and source sector workgroups that may be submitted.
- **June 28, 2019** – All data from non-jurisdictional sources (e.g., USDA, USGS, US Census Bureau, etc.) that may inform modeling changes for the next milestone period must be submitted to, or gathered by, CBPO.
- **June 1 – September 30, 2019** - Draft changes to modeling tools based upon new data are released to workgroups and the Water Quality GIT for consideration, including revised historic progress assessments. Workgroups and Water Quality GIT approve changes to the modeling tools based upon the data on a rolling basis.
- **November 1, 2019** - Final changes to modeling tools provided on CAST for use in the 2020-2021 Milestones. ***Following release of these data, no changes can be made to the modeling tools until October 31, 2021.***
- **January 15, 2020** - Jurisdictions submit 2020-2021 programmatic and numeric milestones to EPA.

## POTENTIAL DATA INPUT CHANGES

The following sections describe data products that may change the modeling tools for each of the planning periods: 2018-2019 Milestones; Phase III WIPs; and 2020-2021 Milestones.

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### 2018-2019 MILESTONES POTENTIAL DATA CHANGES

All model data and methods may not be changed during the 2018 – 2019 milestone development and progress reporting time period per the PSC decision, with the following exceptions:

- Historic implementation data may be updated in NEIEN;
- Permitted, disturbed construction acres for 2018 and 2019; and
- Permitted harvested forest acres for 2018 and 2019..

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### PHASE III WIP DEVELOPMENT

Model data and methods may not be changed during the Phase III WIP development per the PSC decision, with the following exceptions:

- **Interim BMPs** for planning purposes may be added to CAST on a rolling basis until the April 12, 2019 draft Phase III WIP submission deadline. Source sector workgroups, working with the Watershed Technical Workgroup and Water Quality GIT should develop these interim BMP efficiencies, and work with CBPO’s CAST Team to incorporate them in the Phase 6 Model in an efficient manner. To ensure interim BMPs are available as soon as possible for WIP planning purposes, source sector workgroups are encouraged to complete this work well before April 12, 2019.
- Alternative Phase III WIP 2025 **Land Use Policy BMPs** may be developed in consultation with Peter Claggett and the CBPO’s Land Use Team. Jurisdictions may develop one Land Use Policy BMP for their draft Phase III WIP submission on April 12, 2019, and another for their final Phase III WIP submission on August 9, 2019.

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### 2020-2021 MILESTONES

*The process and schedule described below will be the general process and schedule for all future milestone periods unless changed by EPA or the Partnership.*

Data and BMPs used in the Phase 6 Model are subject to change prior to the beginning of each milestone period per the PSC decision. However, changes must be limited in scope so that they do not: 1) impact modeled runoff during the 1993-1995 critical period; or 2) alter the base conditions (land uses, septics, animals, etc.) from 1984 through 2013. Preservation of these estimates will enable the CBPO to provide a consistent assessment of how new management actions and changes in base conditions have influenced loads over time. Given those two requirements, a partial list of data elements to be assessed each milestone period is included below, along with submission deadlines for the 2020-2021 Milestone period. This is a partial list, and partners and source sector workgroups may bring data products forward for further consideration by the Water Quality GIT as needed.

By **April 30, 2019**, all data inputs and BMP information from jurisdictional partners and source sector workgroups, such as those products listed below, must be submitted to CBPO for consideration in the next milestone period. ***Any data submitted past this date will not be considered for the 2020-2021 Milestones.*** By **June 28, 2019**, all data from external sources must be submitted to, or gathered by the CBPO. ***Any data submitted or gathered after this date will not be considered for the 2020-2021 Milestones.***

Once all data are received from internal and external partners, the CBPO will work with source sector workgroups and the Water Quality GIT to review and where necessary, consider changes to the modeling tools.

*The following data inputs and BMP information may be changed:*

- **Land Use and Populations-**
  - County-level population, housing, and employment projections
  - US Census Bureau human population estimates
  - Zoning
  - State-specific land use data, especially where it relates to land use by agency type
  - Sewer service area boundaries
  - MS4 area boundaries
  - Septic system growth by County and/or LRSEG
  - Land use change hotspot analysis to inform 2020-2021 forecasted land uses
  - Historic land use/cover data that will be used to better forecast future land uses (note this will not change historic land uses used to assess past progress or calibrate the model)
- **Agricultural Data –**
  - Animal populations by county (used to distribute statewide animal population estimates where appropriate)
  - Permitted/Non-permitted animal fractions by county
  - Nutrient concentration for animals (minimum of three-year trend needed to alter trend in modeled nutrient concentrations)
  - Manure or litter mass produced per animal (minimum of three-year trend needed to alter trend in modeled manure or litter production)
  - Soil phosphorus data by county
  - AAPFCO fertilizer sales
  - USDA- NASS annual poultry production data
  - USDA-NASS annual crop yield data
  - USDA-NASS 2017 Census of Agriculture
- **Wastewater Data -**
  - WWTP estimated loads through 2025 – these could be estimated as loads for a particular year in the milestone period, or reflect loads described in NPDES permits
  - Biosolid and spray irrigation mass and nutrient concentration application by county
  - Rapid infiltration basin load data

- Large monitored onsite septic system load data
- CSO connections and pass-through data
- **BMPs and Load Delivery–**
  - Newly approved BMP expert panel reports to be used for planning and reporting purposes
  - Newly approved BMP expert panel memos from source sector workgroups that adjust existing BMP definitions, qualifications, efficiencies and crediting methods for any BMP that was not on the ground during the critical modeling period of 1993-1995
  - Delivery factors for areas outside of the watershed which have no impact to loads delivered to streams within the watershed or to the Chesapeake Bay

The following data inputs and BMP information ***may not*** be changed:

- **Land Use and Populations-**
  - Any land use, zoning, population and septic data that combined to form the base conditions that were used to assess loads and load reductions up to the date of the most recent high-resolution land use dataset (2013).
- **Agricultural Data –**
  - Any agricultural data from 1985 through 2013 that combined with other land use information, were used to assess loads and load reductions up to the date of the most recent high-resolution land use dataset (2013).
- **Wastewater Data –**
  - Any wastewater, biosolid, rapid infiltration basin, large monitored onsite septic system load data, CSO connections and pass-through data that were used to assess loads and load reductions up to the date of the most recent high-resolution land use dataset (2013).
- **BMPs -**
  - **Model efficiencies and crediting methods** that would impact practices in place between 1993 and 1995 (the critical period). The examples listed below are not a comprehensive list.
    - Example – the runoff reduction efficiency for upslope acres treated by grass buffers may not change
    - Example – the method of crediting core nutrient management as a change in crop application goal may not change
    - Example – the default credit per linear foot of urban and non-urban stream restoration may not change
    - Example – the mapping of previously reported NEIEN BMPs to different CBP BMPs in the NEIEN Appendix
  - **Definitions and qualifications** that would impact practices in place from 1993 through 1995 (the critical period). The examples listed below are not a comprehensive list.
    - Example – the width requirements of grass buffers may not change
    - Example – the requirements for receiving credit under the core nutrient management practices may not change
    - Example – the qualifying conditions of stream restoration practices may not change
  - **BMPs that were in place between 1993 and 1995 (the critical period)**, but were previously credited using a different BMP or were not credited at all. The examples listed below are not a comprehensive list.
    - Example – providing a separate credit for grassed waterways on agricultural land may not be done as they were previously credited under a different practice
    - Example – providing a separate credit for soil health practices that combines the credit of cover crops and conservation tillage practices may not be done as they were previously credited under the separate practices

- Example – the mapping of previously reported NEIEN BMPs to different CBP BMPs in the NEIEN Appendix
- **Credit duration** of BMPs that were in place between 1993 and 1995. The examples below are not a comprehensive list.
  - Example – changing the credit duration of grass buffers from 10 years to 5 years may not be done as that would impact implementation during this period
  - Example – changing the credit duration of nutrient management from 1 year to 3 years may not be done as that would impact implementation and require re-reporting of all implementation, during this period

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#### OTHER REQUESTS FOR CHANGES

The above list of data products that may or may not impact future planning and progress assessment using the Phase 6 Model is not exhaustive. Following the PSC's direction, source sector workgroups may bring forward other requests for changes that can be assessed by the Water Quality GIT. The Water Quality GIT will then assess these requests and determine if and when appropriate changes to the Phase 6 Model can be made.